

PLANS FOR CONSTRUCTION OF:

TONGUE RIVER RESERVOIR STATE PARK CAMPERS AND PEE WEE POINT CAMPGROUND IMPROVEMENTS PROJECT

NEAR DECKER, MONTANA
FWP #7096502

SHEET INDEX

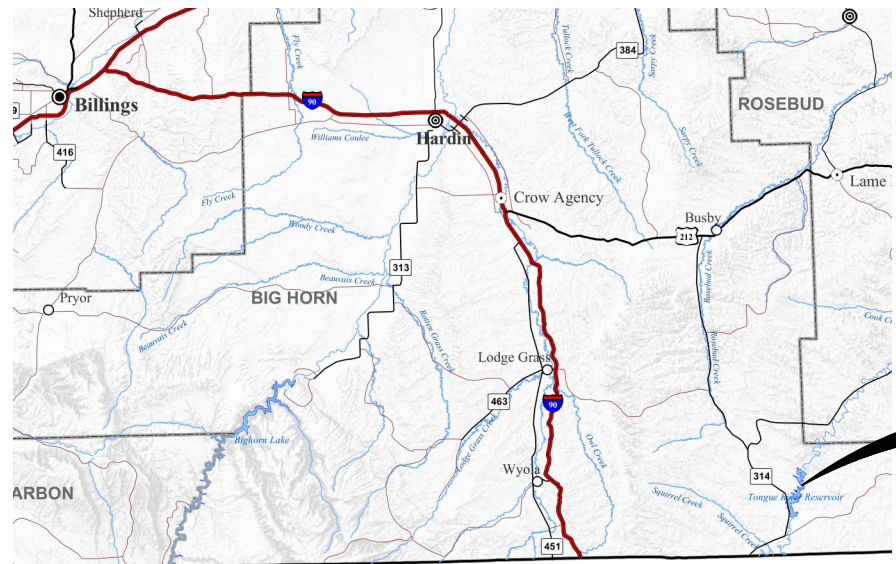
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PROJECT LOCATION MAP



THIS PROJECT

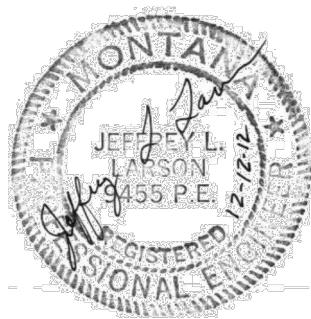
LEGEND

NEW FEATURES

	EXISTING GRAVEL SURFACING RESTORATION		ELECTRICAL PEDESTAL
	NEW GRAVEL SURFACING		GRAVITY SEWER LINE
	NEW CONCRETE		WATER LINE
	BUILDINGS		SEWER FORCE MAIN
	CAMP SPACE IDENTIFICATION #		WATER HOOKUP
	LANDSCAPING ROCK		SEWER HOOKUP
	CONDUIT		WATER VALVE
			SEWER CLEAN OUT
			PUMP CONTROL PANEL

EXISTING FEATURES

	ASPHALT		BUILDINGS
	GRAVEL		POWER POLE
	CULVERT		WELL



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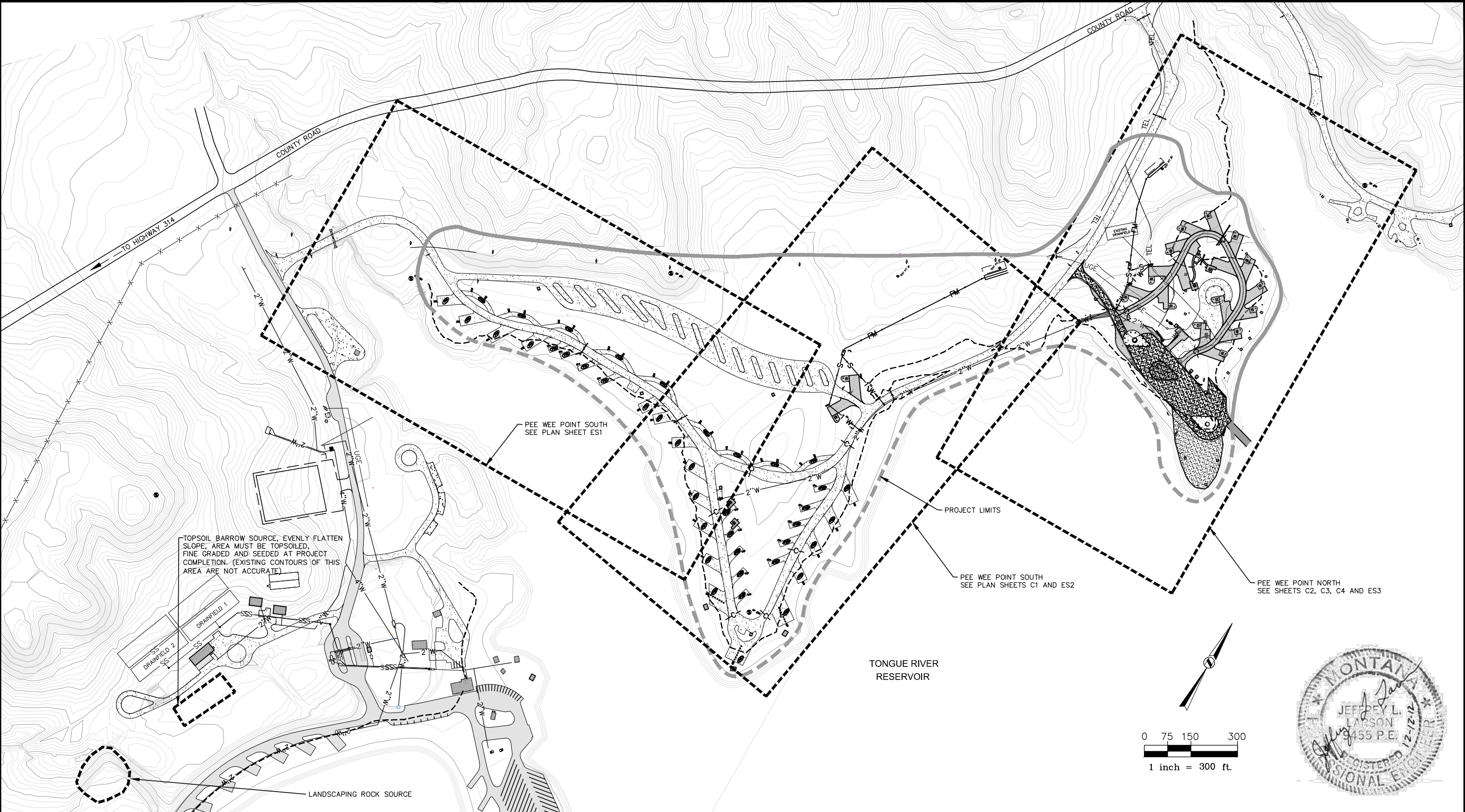
Montana Fish & Wildlife & Parks

TITLE SHEET
TONGUE RIVER RESERVOIR STATE PARK
FWP #7096502



28 ANTLER AVENUE
CLANCY, MT 59634
406-443-6111
jeff@larsonce.com

SHEET: T1



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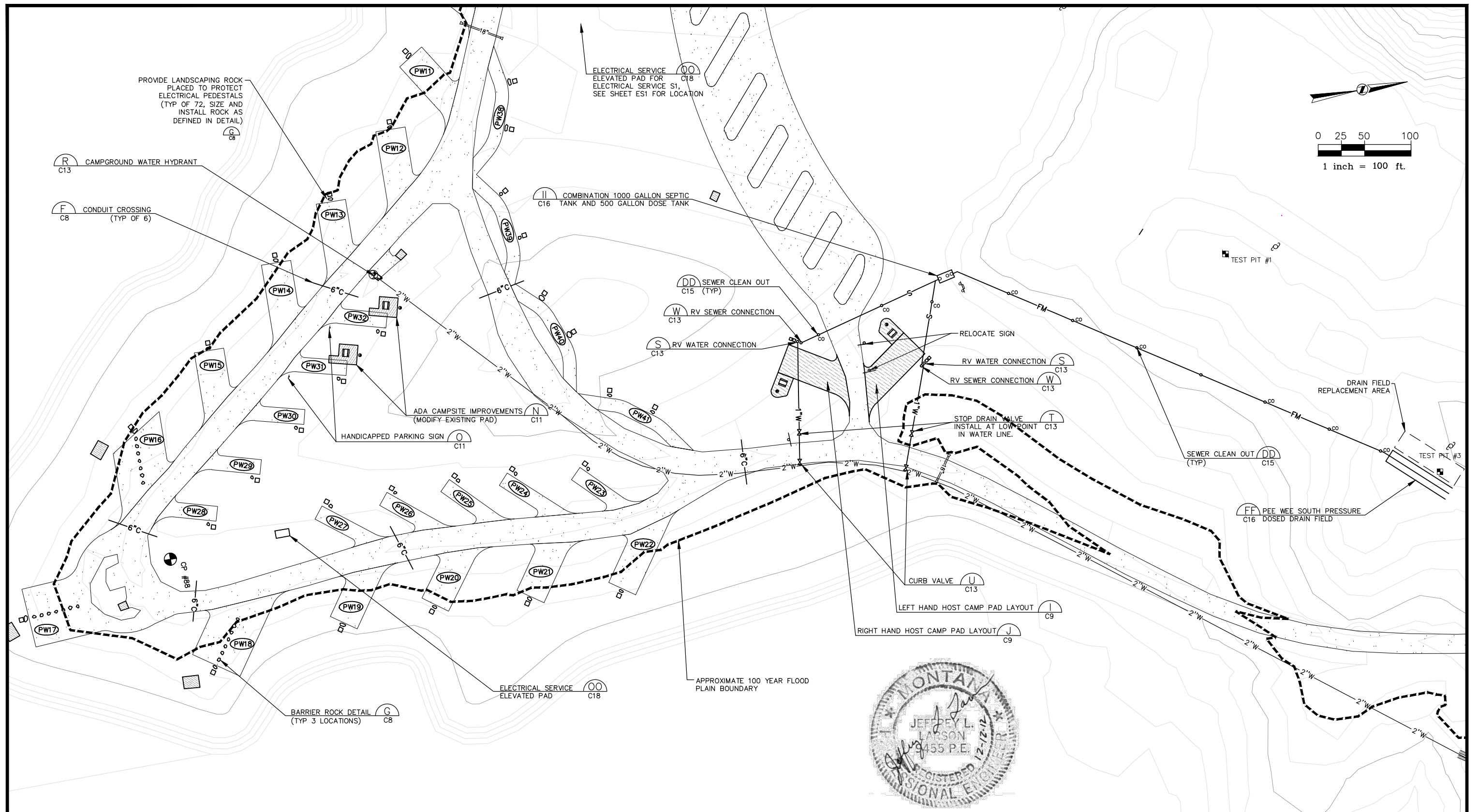
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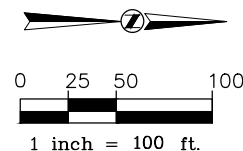
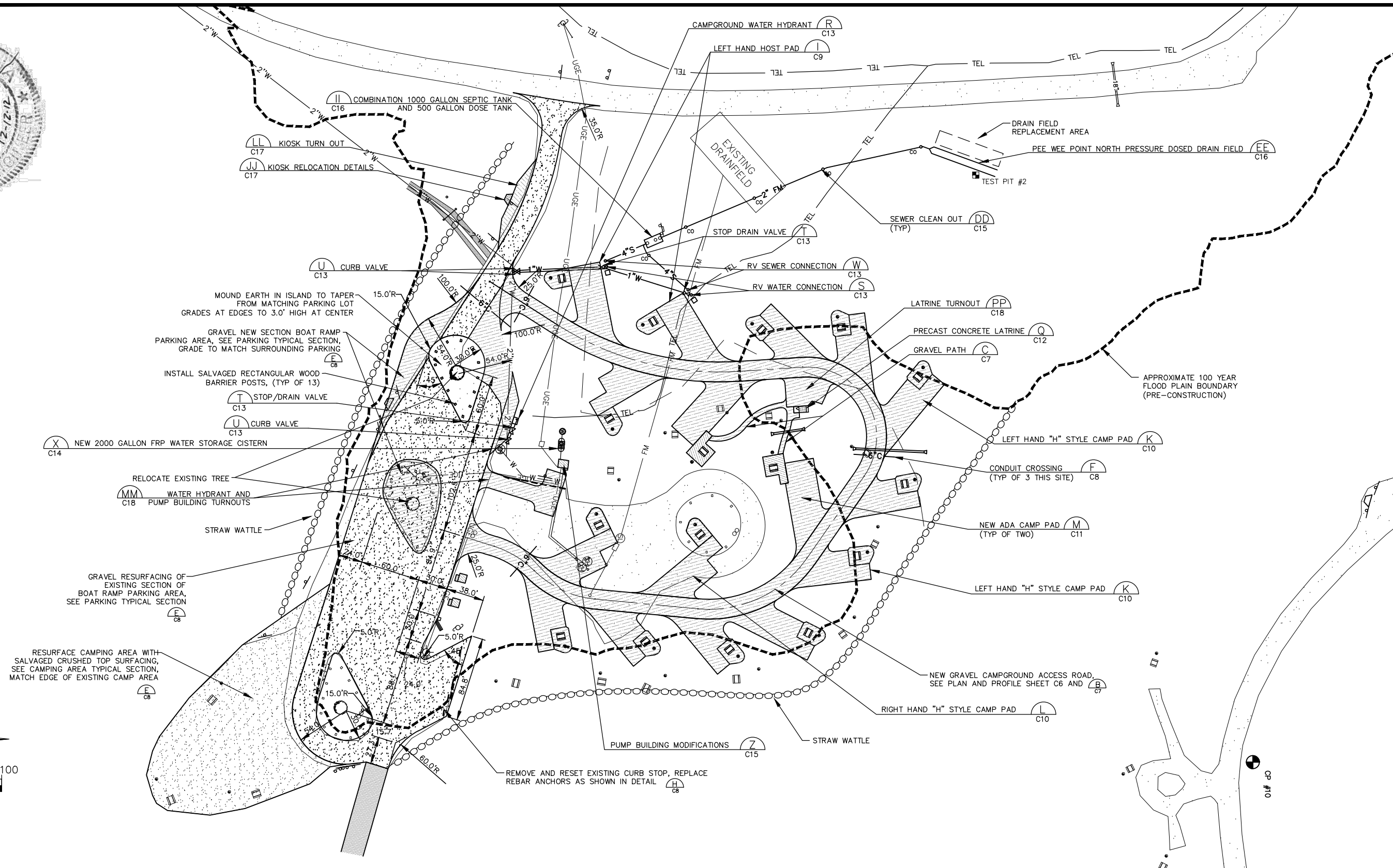
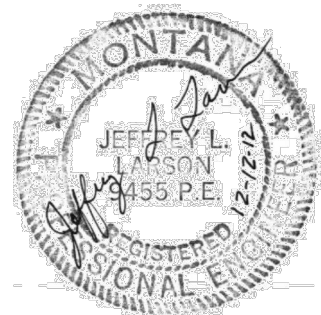
OVERALL SITE PLAN
TONGUE RIVER RESERVOIR STATE PARK
FWP #7096502

LARSON CIVIL
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SHEET: **C1**



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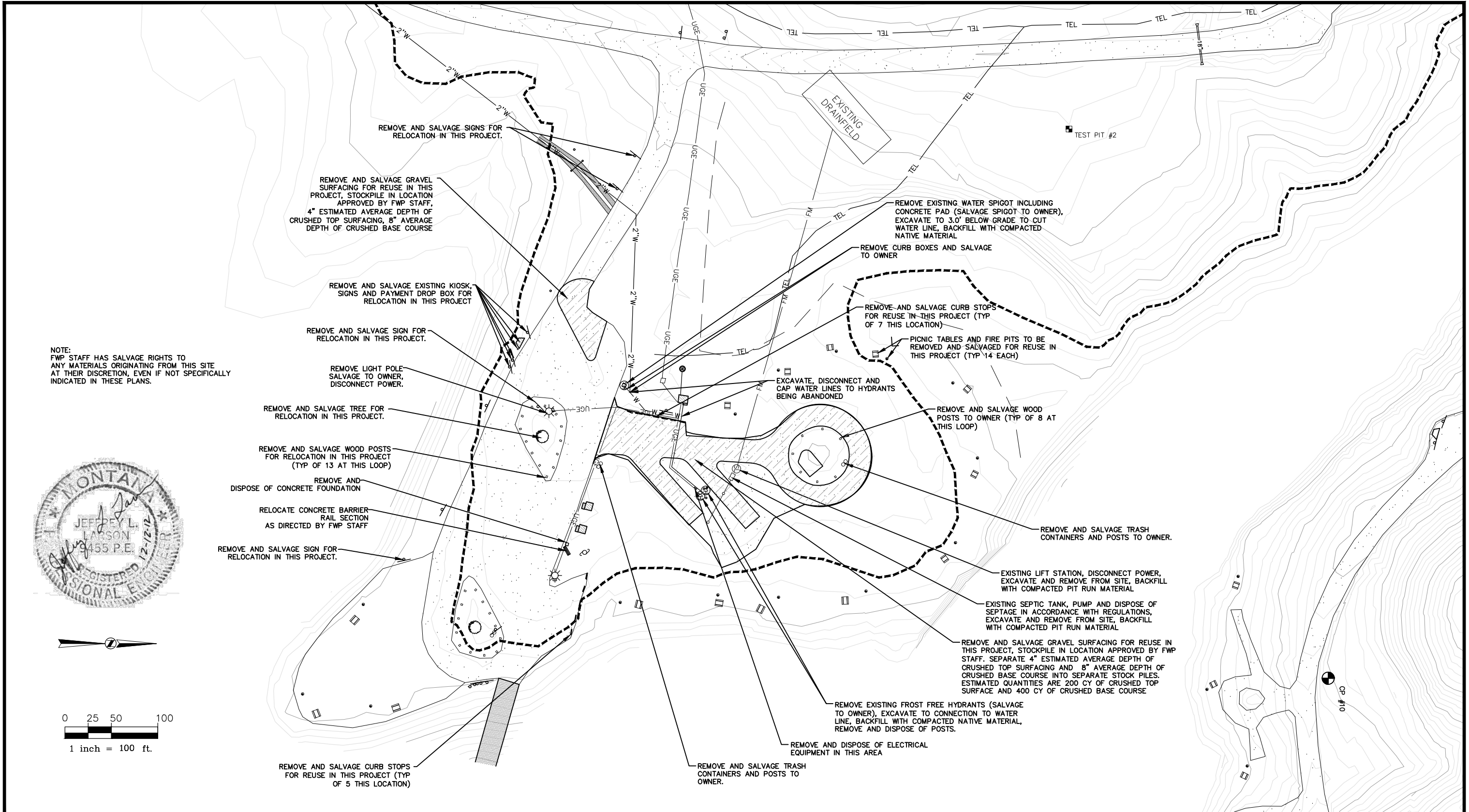
Montana Fish & Wildlife

PEE WEE POINT NORTH SITE PLAN
TONGUE RIVER RESERVOIR STATE PARK
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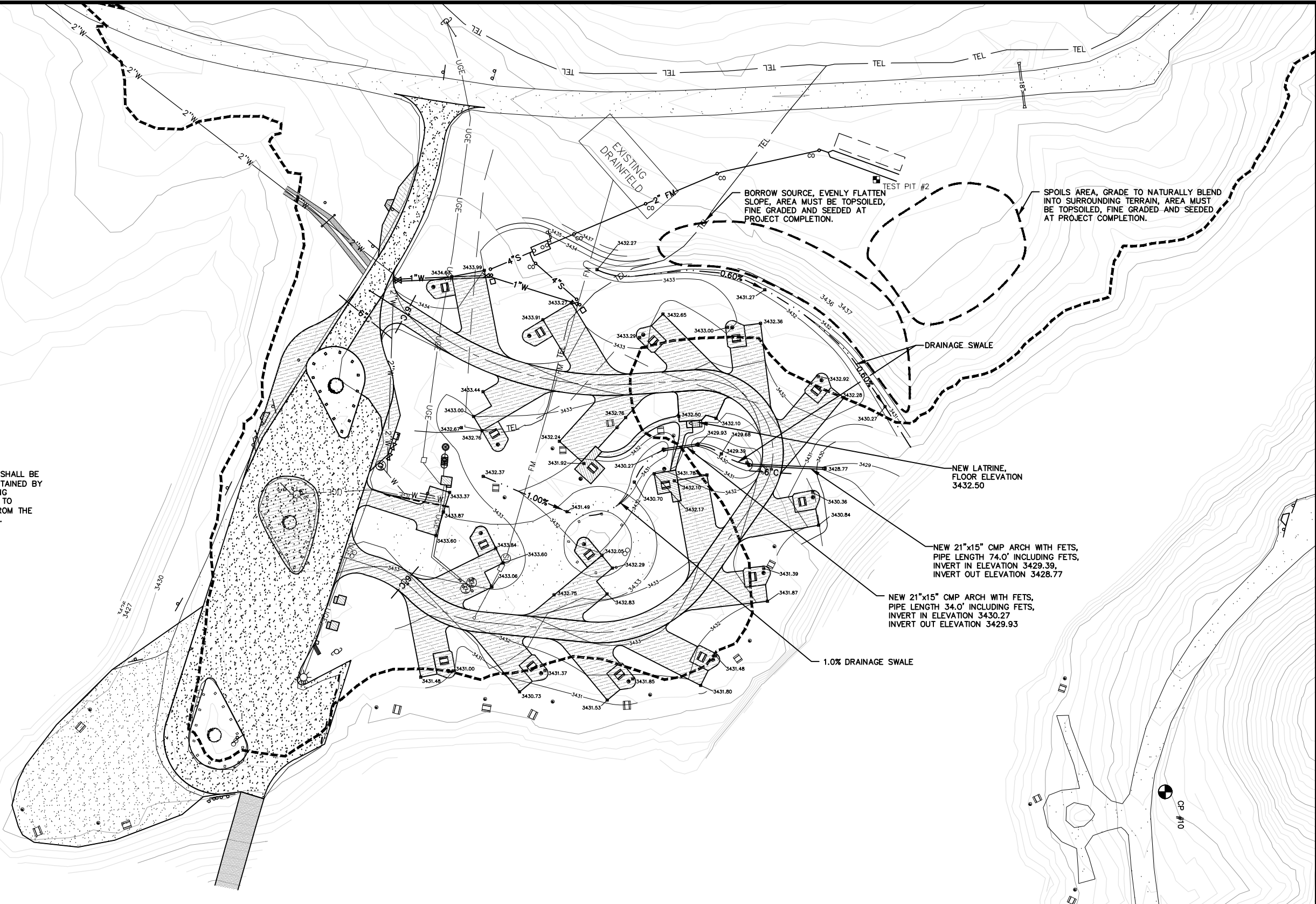
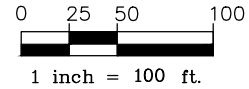
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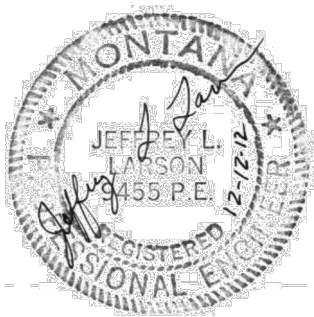
NOTES:
GRADED SURFACES THAT ARE NOT GRAVELED SHALL BE TOPSOIL TO A 4" DEPTH. TOPSOIL WILL BE OBTAINED BY SALVAGING FROM THE SITE PRIOR TO BEGINNING EXCAVATION. ADDITIONAL TOPSOIL NECESSARY TO OBTAIN THE 4" DEPTH SHALL BE IMPORTED FROM THE LOCATION SHOWN ON THE OVERALL SITE PLAN.



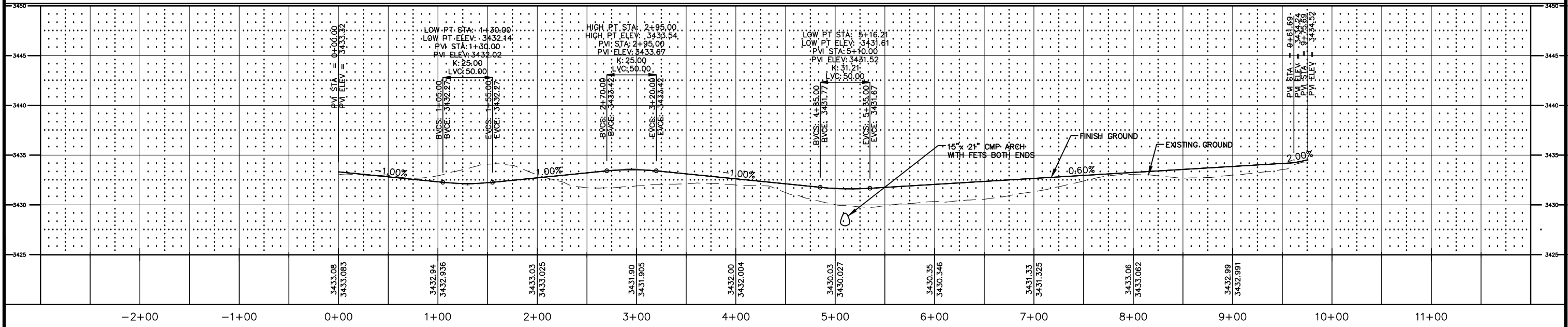
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CURVE DATA					
MARKER	PI STATION	CURVE RADIUS	DELTA ANGLE	CURVE LENGTH	TANGENT LENGTH
A	0+56.55	100.00'	27°20'46"	47.43'	24.33
B	1+15.89	100.00'	39°31'58"	69.00'	35.94
C	3+23.05	120.00'	60°26'22"	126.28'	69.90
D	6+26.08	70.00'	128°37'22"	157.14'	145.52
E	8+01.75	300.00'	36°19'04"	190.16'	98.40



CAMP LOOP PROFILE



CONSTRUCTION NOTES:

1.

ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH "MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS", SIXTH EDITION (MPW).
2.

BEDDING MATERIAL SHALL BE CLEAN AGGREGATE, WITH A MINIMUM OF 90% RETAINED ON A #4 SEIVE.
3.

BEFORE DIGGING, CALL 811 FOR LOCATION OF EXISTING UTILITIES.
4.

CRUSHED BASE COURSE SHALL BE 1" MINUS PER MPW SPECIFICATIONS.
5.

CONCRETE SLABS AND SIDEWALK SHALL BE REINFORCED WITH FIBER MESH, CROSS SLOPE ALL CONCRETE AT 1.5%, UNLESS OTHERWISE INDICATED.
6.

ALL DISTURBED AREAS SHALL BE TOPSOILED AND SEEDED AND MULCHED. TOPSOIL SHALL BE SALVAGED FROM THE SITE WITH ADDITIONAL IMPORTED TOPSOIL AS DIRECTED. SEED MIX SHALL BE NATIVE UPLAND GRASSES.
7.

CRUSHED TOP SURFACING FOR GRAVEL SURFACING SHALL MEET THE FOLLOWING SPECIFICATIONS INCLUDING BINDER OR BLENDING MATERIAL:
- | SIEVE SIZE | % PASSING |
|---------------|-----------|
| 3/4" SIEVE | 100% |
| No. 4 SIEVE | 40-80% |
| No. 10 SIEVE | 25-60% |
| No. 200 SIEVE | 8-20% |

IN ADDITION, THE PORTION PASSING THE NO. 200 SIEVE CANNOT EXCEED 2/3 OF THE PORTION PASSING THE #40 SIEVE; THE MAXIMUM LIQUID LIMIT FOR THE MATERIAL PASSING THE NO. 40 SIEVE SHALL NOT EXCEED 35, WHILE THE PLASTICITY INDEX CAN VARY BETWEEN 3 AND 10; THE WEAR FACTOR SHALL NOT EXCEED 50% AT 500 REVOLUTIONS; AND AT LEAST 20% OF THE AGGREGATE RETAINED ON NO. 4 SIEVE SHALL HAVE A FRACTURED FACE.
8.

THE CONTRACTOR SHALL REMOVE AND RESET ALL PICNIC TABLES AND FIRE PITS IN CONFLICT WITH CONSTRUCTION. NEW LOCATIONS SHALL BE AS SHOWN IN THE PLANS.
9.

THE CONTRACTOR SHALL REMOVE AND RESET ALL CONCRETE CURB STOPS IN CONFLICT WITH CONSTRUCTION. NEW LOCATIONS SHALL BE AS SHOWN IN THE PLANS.
10.

ALL TRENCH BACKFILL ON THIS PROJECT SHALL BE TYPE A AS DEFINED BY THE MPW SPECIFICATION. THIS REQUIRES ALL TRENCH COMPACTION, TO AT LEAST 95% OF MAXIMUM DRY DENSITY DETERMINED BY AASHTO T99 OR BY ASTM D698. THE COMPACTION SECTION OF THIS SPECIFICATION SHALL ALSO APPLY TO ELECTRICAL TRENCHES.
11.

ALL EXCAVATION AND EMBANKMENT ON THIS PROJECT, EXCLUDING TRENCH EXCAVATION AND BACKFILL, SHALL MEET THE REQUIREMENTS OF MPW SPECIFICATION 02/230 STREET EXCAVATION, BACKFILL AND COMPACTION.
12.

CRUSHED TOP SURFACE SHALL BE PLACED AND COMPACTED AS IDENTIFIED IN MPW SPECIFICATION 02/235 CRUSHED BASE COURSE.
13.

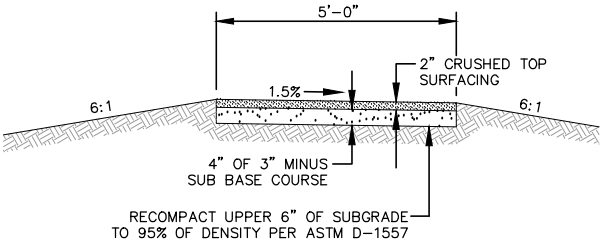
ALL BURIED SEWER PIPE SHALL BE SCHEDULE 40 PVC.
14.

PROVIDE HYDRAULIC SEEDING OF ALL DISTURBED AREAS IN COMPLIANCE WITH MPW SPECIFICATION 02/920 HYDRAULIC SEEDING. SEED MIX SHALL BE APPLIED AT A RATE OF 16 LBS PER ACRE. THE SEED MIX SHALL AS FOLLOWS:

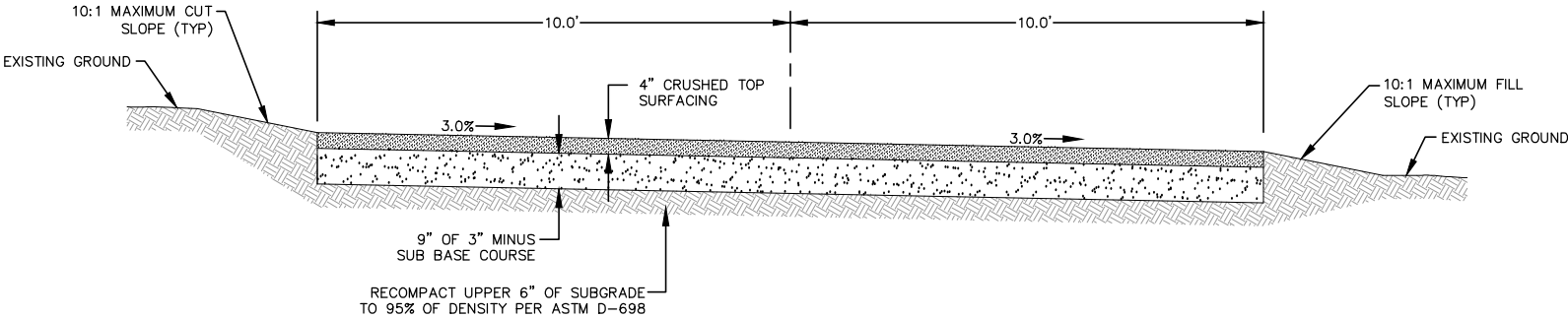
GRASS SPECIES	% PLS COUNT
STREAMBANK WHEATGRASS	40%
WESTERN WHEATGRASS	20%
SHEEP FESCUE	20%
BLUE GRAMA	20%

MPW STANDARD DRAWINGS

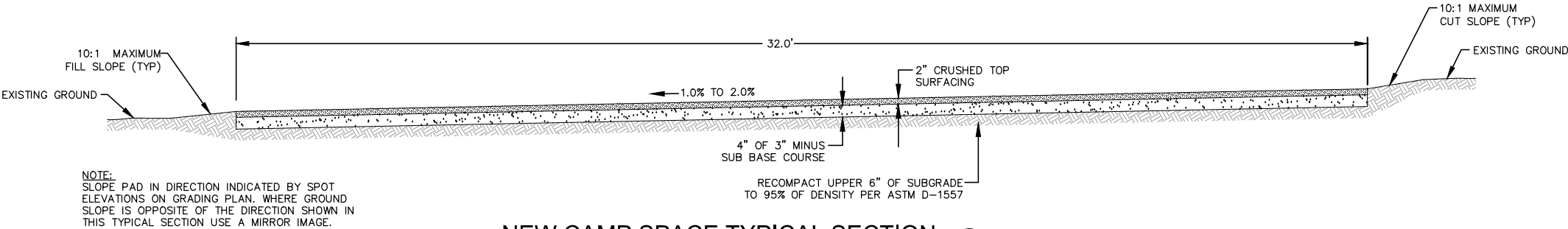
02221-1 TYPICAL UTILITY TRENCH
02221-2 PIPE BEDDING ALTERNATE



GRAVEL PATH TYPICAL SECTION
NO SCALE



CAMP LOOP ROAD TYPICAL SECTION
NO SCALE



NEW CAMP SPACE TYPICAL SECTION
NO SCALE

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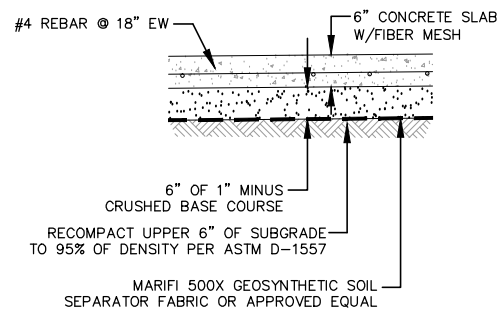
TYPICAL SECTIONS & NOTES
TONGUE RIVER RESERVOIR STATE PARK
FWP #7096502



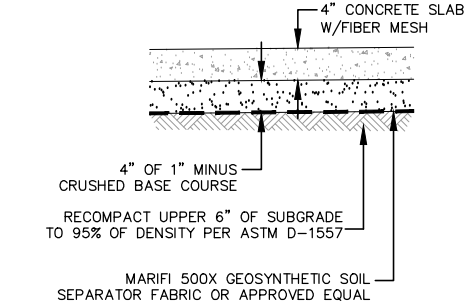
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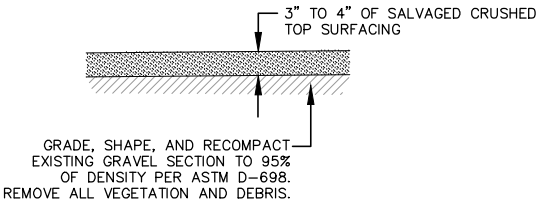
ADA PARKING SURFACING



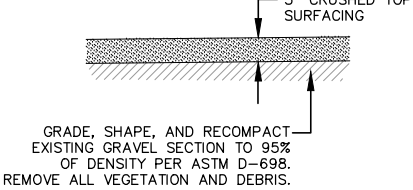
STANDARD SIDEWALK



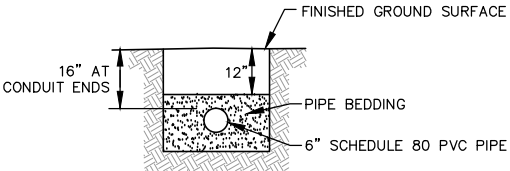
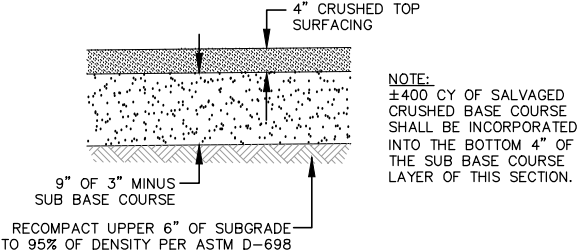
CAMPING AREA RESURFACING
WITH SALVAGED CRUSHED TOP SURFACING



EXISTING ROAD AND PARKING AREA
GRAVEL SECTION



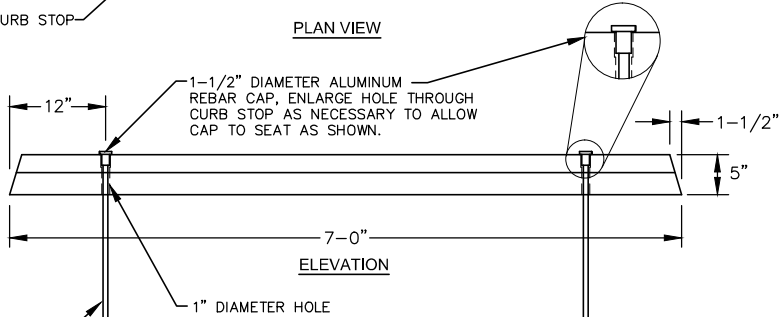
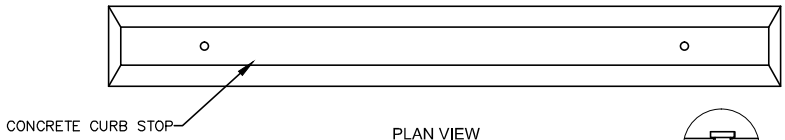
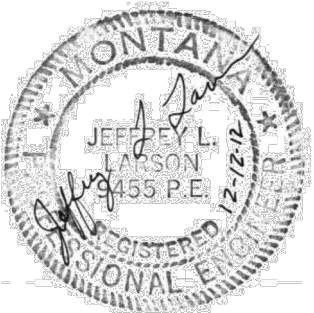
NEW PARKING GRAVEL SECTION



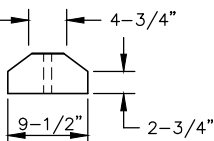
- NOTES:
1. EXTEND CONDUIT 10.0' BEYOND EDGE OF EXISTING OR NEW GRAVEL.
 2. INSTALL 6" PVC CAPS AT BOTH PIPE ENDS, DO NOT GLUE.
 3. INSTALL CONDUIT ON A STRAIGHT LINE GRADE BETWEEN PIPE ENDS.
 4. REMOVE AND REPLACE GRAVEL SURFACING AT EXISTING ROAD CROSSINGS. MATCH SURFACING SECTION FOR NEW GRAVEL ROADS.
 5. REMOVE AND REPLACE EXISTING TOPSOIL. SEED ALL DISTURBED AREAS THAT ARE NOT GRAVELED.
 6. MARK PIPE ENDS WITH #5 REBAR, 30" LONG, TOPPED WITH A BLUE PLASTIC SURVEY CAP MARKED "CONDUIT END", SET TOP OF CAP 1" ABOVE GROUND LEVEL.

CONDUIT TRENCH SECTION F
C2,C3

NO SCALE



#5 REBAR, 36" LONG (TYP)



- NOTES:
- SLIGHT DIFFERENCES IN DIMENSIONS MAY BE ALLOWED AT THE ENGINEER'S DISCRETION.

CONCRETE CURB STOP DETAIL H
C3,C9,C10,C11,C18

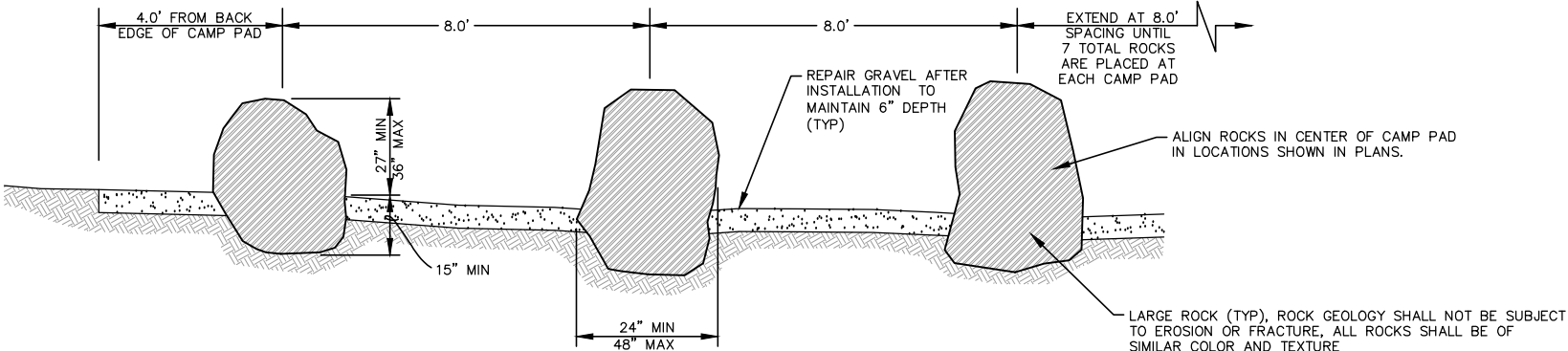
NO SCALE

NEW CONCRETE SURFACING SECTIONS D
C11

NO SCALE

PARKING TYPICAL SECTIONS E
C3,C17,C18

NO SCALE



NOTE:
ROCK IS AVAILABLE FROM ON-SITE, SEE THE OVERALL SITE PLAN FOR LOCATION. MUCH OF THE ROCK IS OVERSIZE AND WILL REQUIRE BREAKING INTO SMALLER SIZES BEFORE USE.

BARRIER ROCK DETAIL G
C2

NO SCALE

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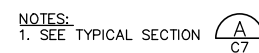
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SECTIONS AND DETAILS
TONGUE RIVER RESERVOIR STATE PARK
FWP #7096502

LARSON CIVIL
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SHEET: **C8**



20' WIDE ACCESS ROAD

25.0' R

EDGE OF GRAVEL

RV WATER CONNECTION, SEE DETAIL
S C13

ELECTRICAL PEDESTAL, SEE ELECTRICAL PLANS

PICNIC TABLE
KK C17

3.0' RADIUS

FIRE PIT
NN C18

5.0' CLEAR

6.5' RADIUS

5.0'

5.0'

8.0' TO CENTER (TYP)

31.0'

18.0'

20.0'

32.0'

LONGITUDINAL SLOPE
BETWEEN 1.0% TO 3.0%
EITHER DIRECTION

60.0'

15.0' R

CONCRETE CURB STOP
H C8

6.5'

PHONE PEDESTAL,
SEE ELECTRICAL PLANS

RV SEWER CONNECTION
W C13

LANDSCAPING ROCKS

4.0'

4.0'

4.0'

4.0'

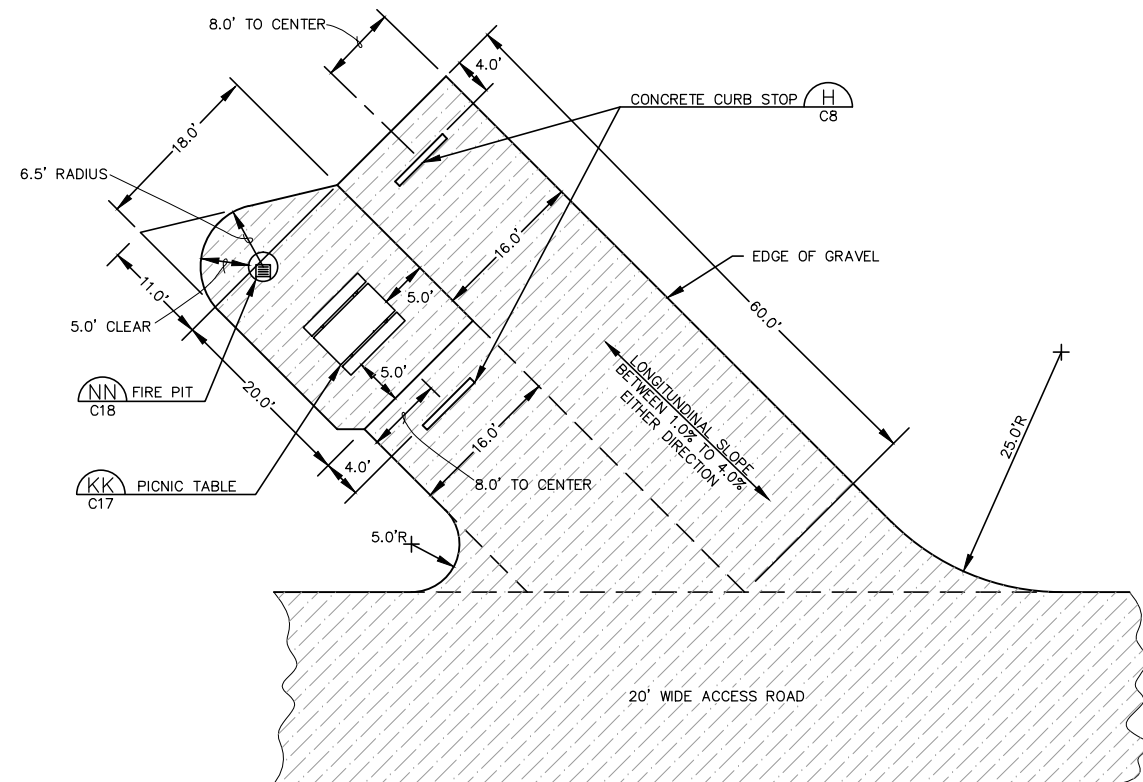
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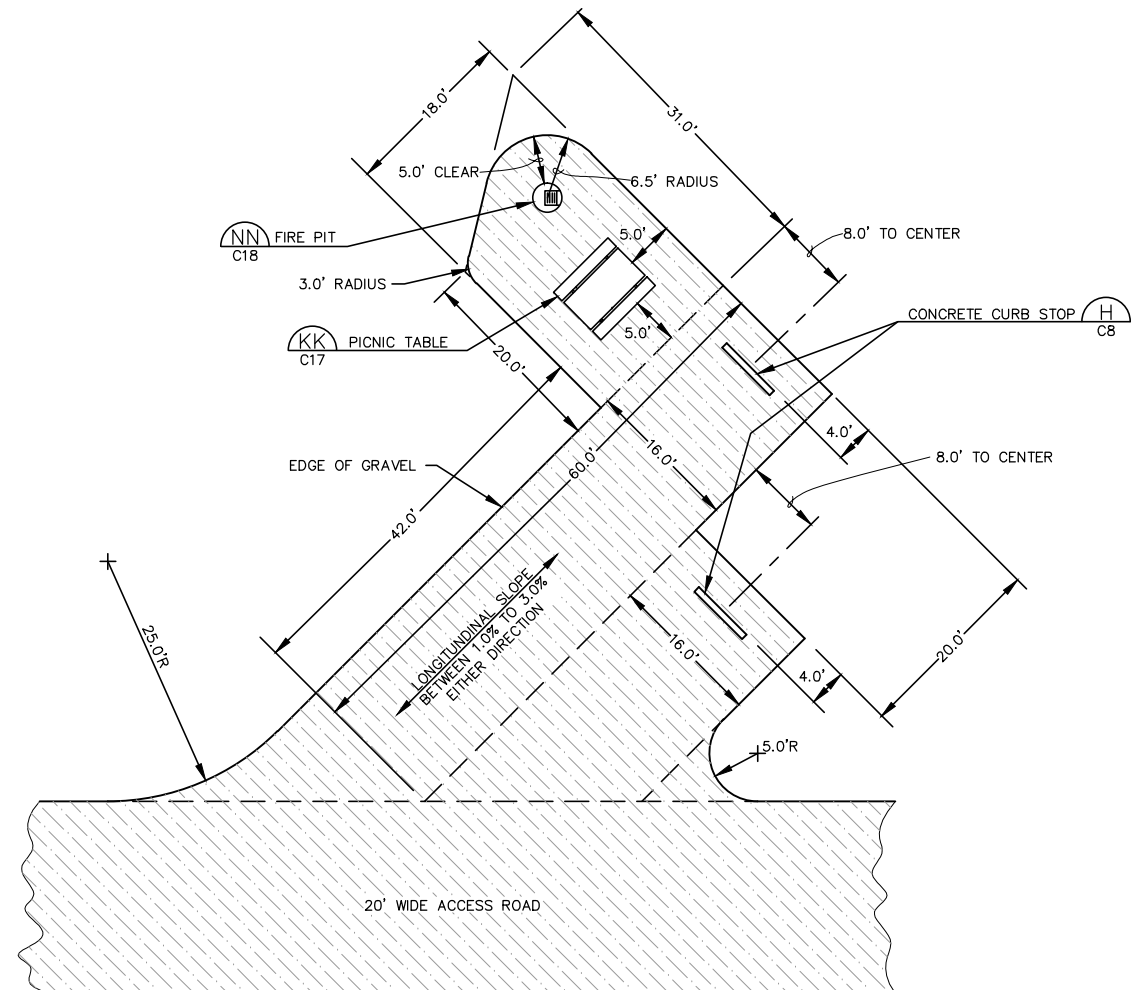
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C9

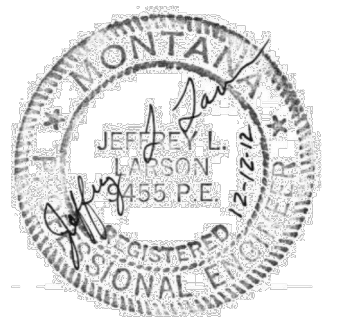


LEFT HAND "H" STYLE CAMP PAD K
C3
NO SCALE

NOTES:
1. SEE TYPICAL SECTION A
C7



RIGHT HAND "H" STYLE CAMP PAD L
C3
NO SCALE



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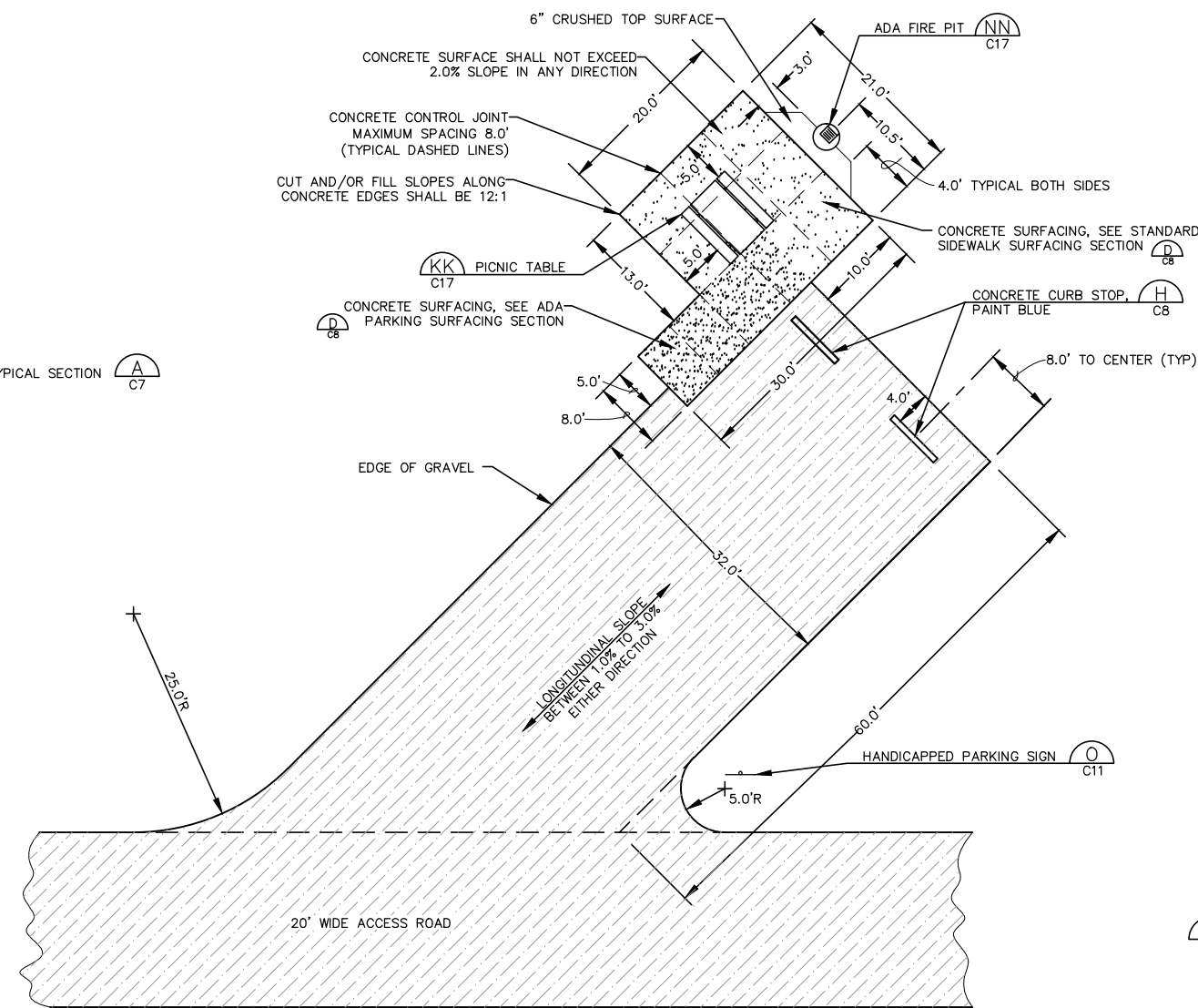
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"H" STYLE CAMP PAD DETAILS
TONGUE RIVER RESERVOIR STATE PARK
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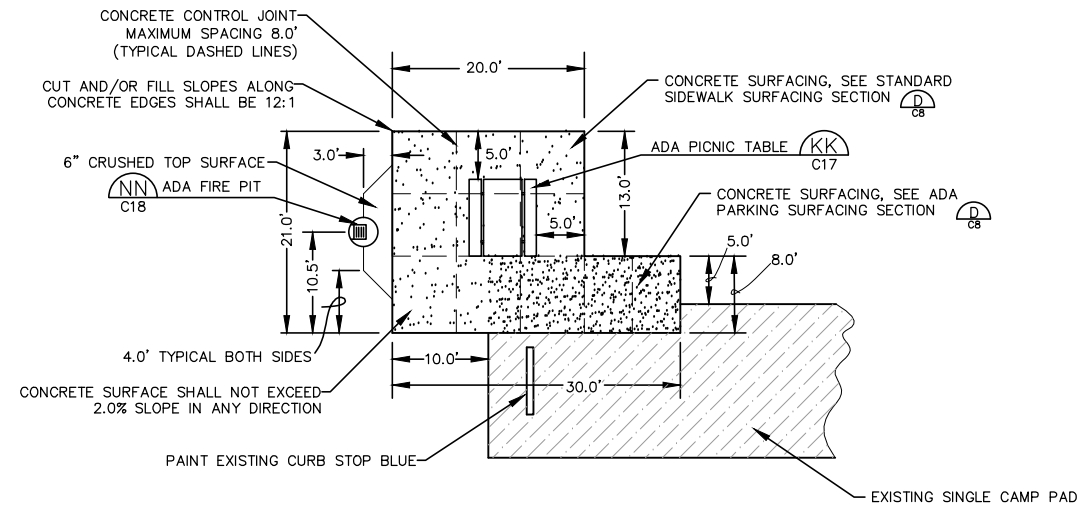


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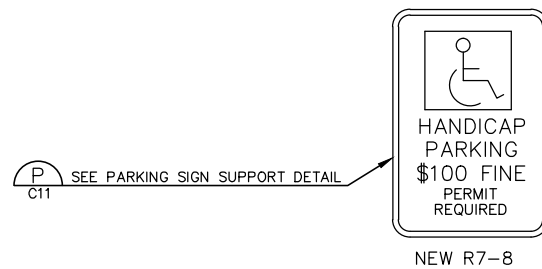
SHEET: **C10**



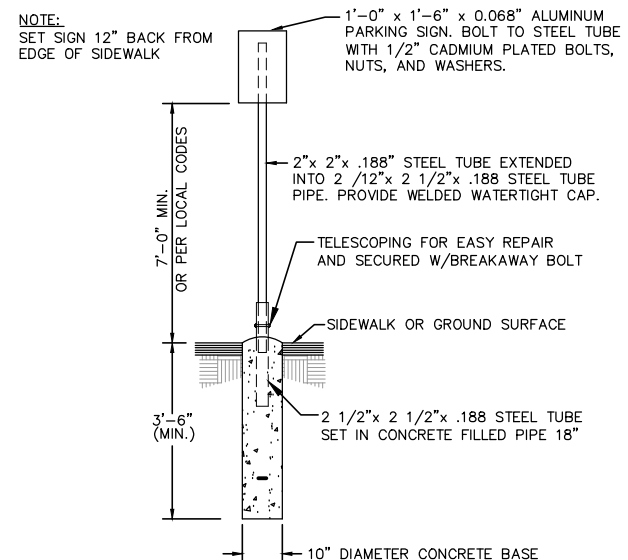
NEW ADA CAMP PAD
NO SCALE



ADA CAMPSITE IMPROVEMENTS (MODIFY EXISTING PAD)
NO SCALE



HANDICAPPED PARKING SIGN
NO SCALE



PARKING SIGN SUPPORT
NO SCALE

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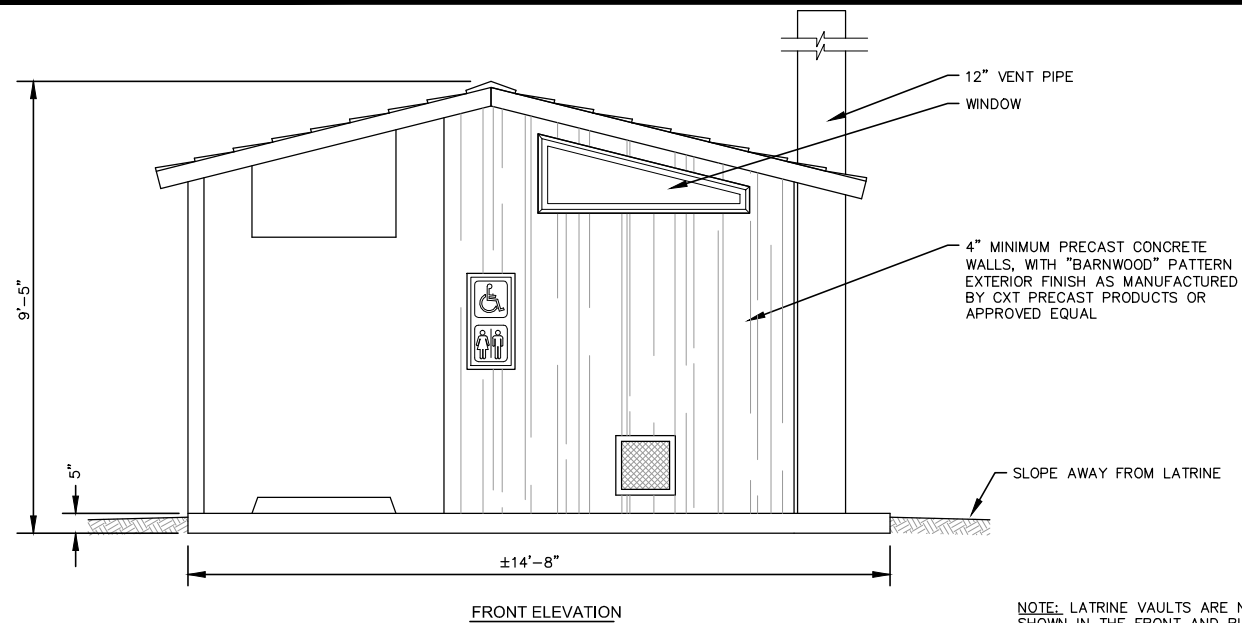
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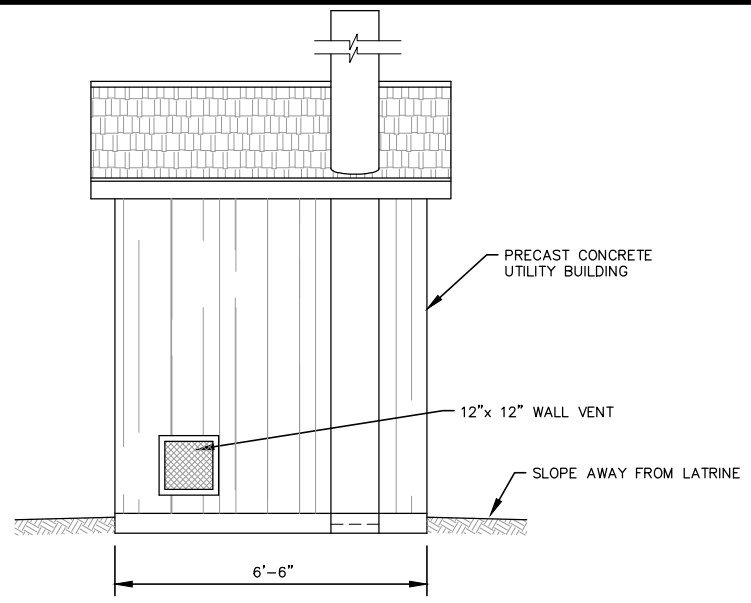
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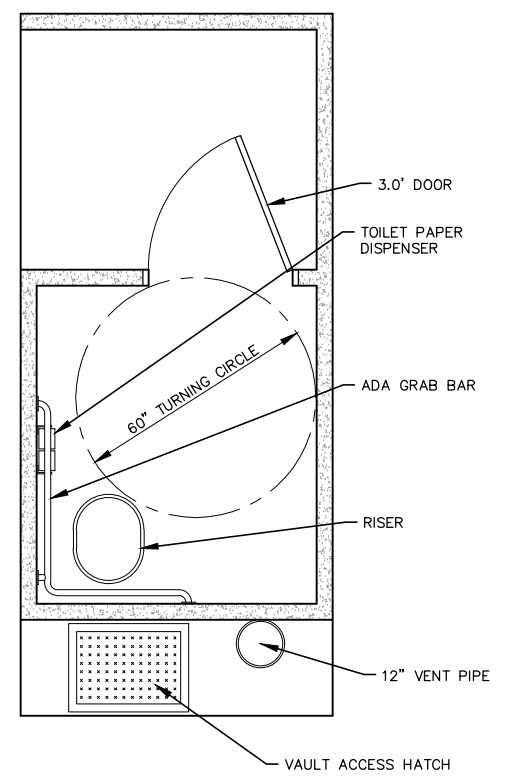
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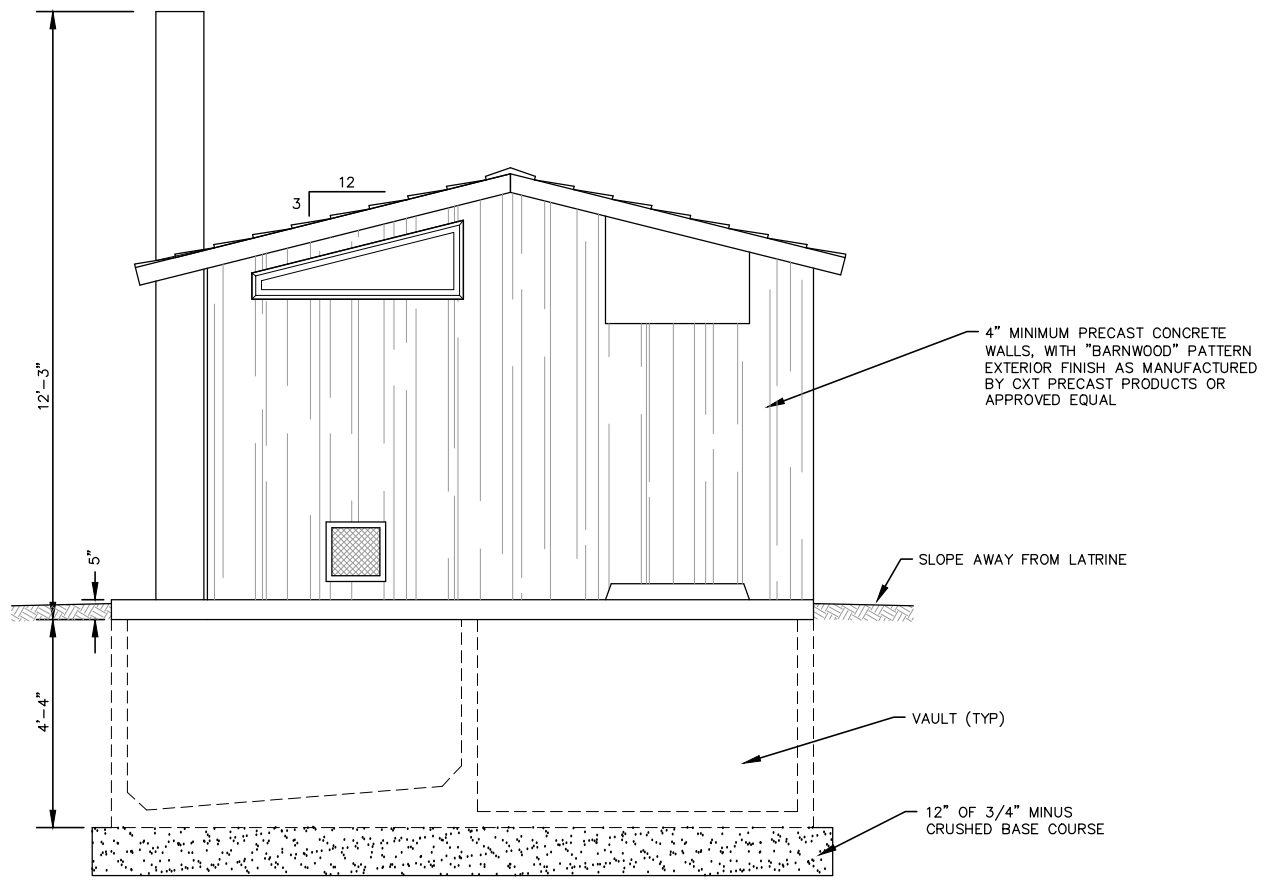
FRONT ELEVATION



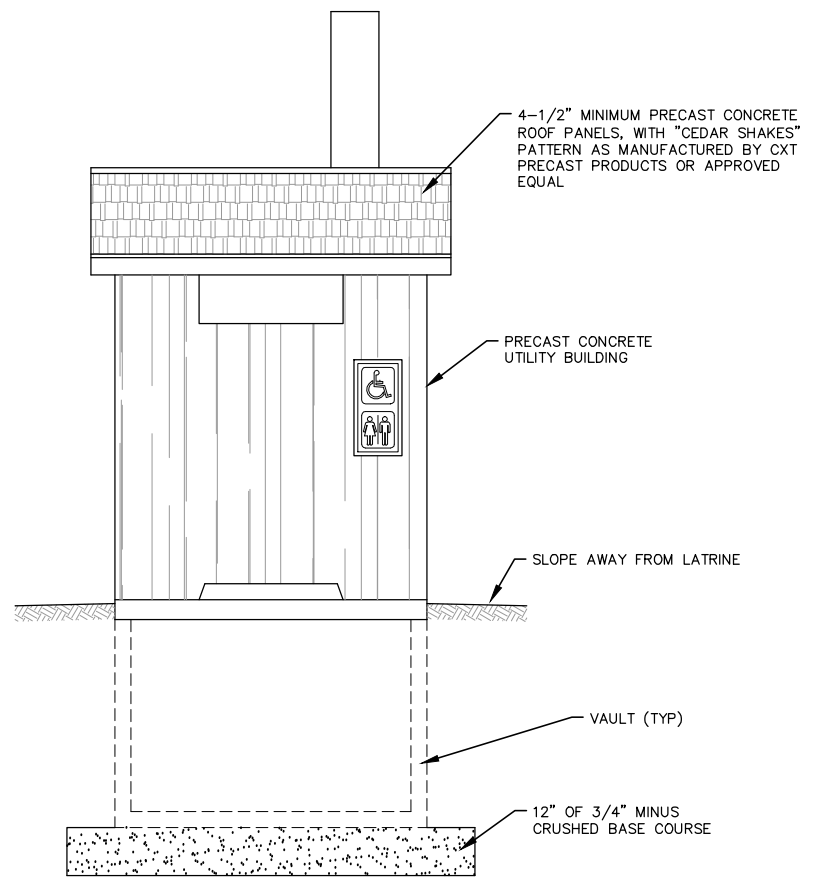
RIGHT SIDE ELEVATION



PLAN VIEW

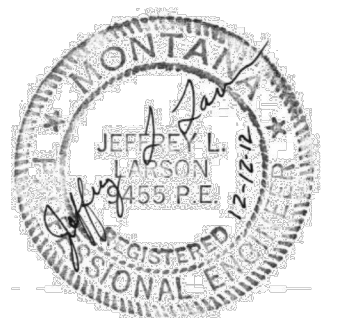


REAR ELEVATION



LEFT SIDE ELEVATION

- NOTES:
1. PRECAST CONCRETE LATRINE SHALL BE CONSTRUCTED WITH A MINIMUM FLOOR THICKNESS OF 5", A MINIMUM WALL THICKNESS OF 4", AND A MINIMUM ROOF PANEL THICKNESS OF 4-1/2".



PRECAST CONCRETE LATRINE
NO SCALE

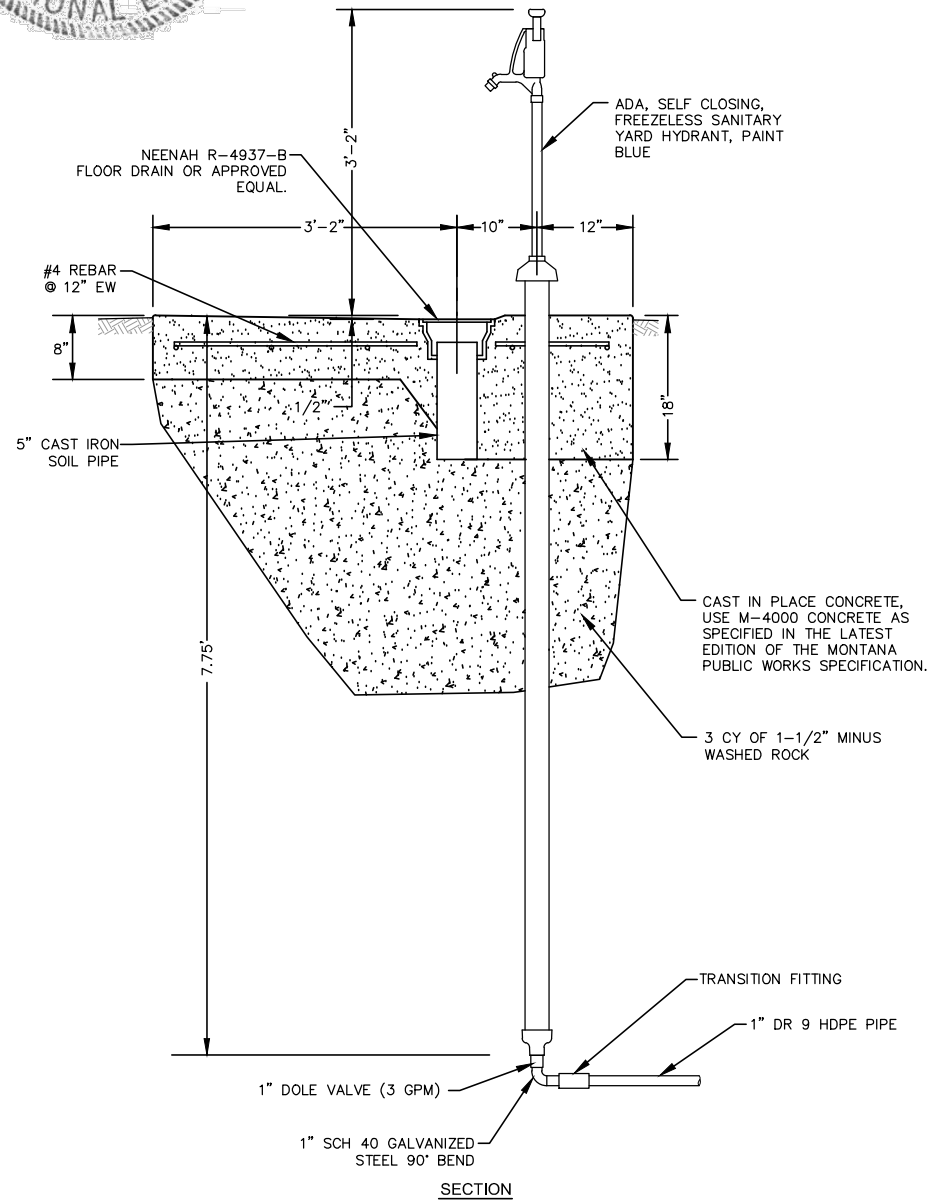
J. LARSON	DEC. 12, 2012	REVISED BY:	DATE:	APPROVED BY:	DATE:
DRAWN BY:	DATE:	J. LARSON	DEC. 12, 2012		
J. LARSON	DEC. 12, 2012	APPROVED BY:	DATE:		
CHECKED BY:	DATE:				



PRECAST LATRINE DETAILS
TONGUE RIVER RESERVOIR STATE PARK
FWP #7096502

LARSON CIVIL
ENGINEERING, LLC
28 ANTLER AVENUE
CLANCY, MT 59634
406-443-6111
jeff@larsonce.com

SHEET: C12



3/4" SCH 40 GALVANIZED STEEL 90° BEND

3/4" SOLID BRASS HOSE BIB FOR OUTDOOR USE

1" CHAMFER ALL AROUND TOP OF POST

8"x 8"x 48" CEDAR POST

24"

18"

GALVANIZED STEEL PIPE CLAMP

3/4" SCH 40 GALVANIZED STEEL PIPE

TRANSITION FITTING

1" DR 9 HDPE PIPE

Diagram illustrating the plan view of a broom finish area, showing dimensions and components:

- Dimensions:**
 - Overall width: 5.0'
 - Overall height: 18"
 - Radius of circular features: 5.0'
 - Offset from bottom edge: 3" TYP
- Components and Callouts:**
 - PIPE BOLLARD (TYP OF TWO PER HYDRANT)**: Points to the circular features.
 - ADA, SELF CLOSING, FREEZELESS SANITARY YARD HYDRANT**: Points to the central hydrant symbol.
 - NEENAH R-4937-B FLOOR DRAIN OR APPROVED EQUAL.**: Points to the central drain symbol.
 - BROOM FINISH**: Points to the rectangular area.
 - SLOPE**: Indicated by arrows pointing towards the central drain.
 - V C13**: A circular symbol with a 'V' inside, located at the top right.

PLAN

PAINT CURB BOX COVER RED

GRADE TO DRAIN AWAY FROM CURB BOX

6.0' MIN.

MINNEAPOLIS PATTERN CURB BOX

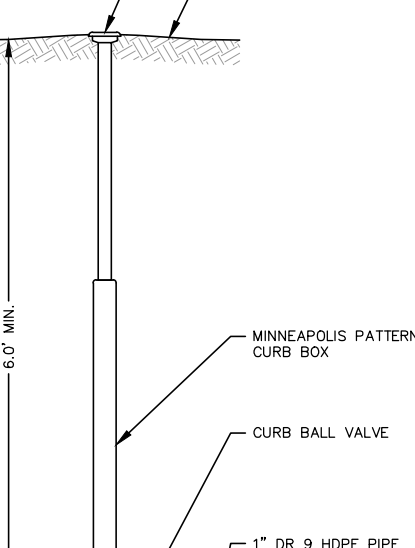
STOP DRAIN VALVE

COMPRESSION ADAPTER (TYP BOTH VALVE ENDS)

1" DR 9 HDPE PIPE

0.5 CY OF 1-1/2" MINUS WASHED ROCK

This technical drawing illustrates the installation of a curb box. A vertical pipe, labeled '1" DR 9 HDPE PIPE', passes through a 'MINNEAPOLIS PATTERN CURB BOX'. The pipe is equipped with a 'STOP DRAIN VALVE' and 'COMPRESSION ADAPTER (TYP BOTH VALVE ENDS)' at its base. The curb box is set into a foundation of '0.5 CY OF 1-1/2" MINUS WASHED ROCK'. The ground surface is indicated by a hatched line, with a note 'GRADE TO DRAIN AWAY FROM CURB BOX'. A 'PAINT CURB BOX COVER RED' instruction is shown at the top. A vertical dimension line on the left indicates a depth of '6.0' MIN.' from the ground level to the base of the curb box.



PAINT CURB BOX COVER BLUE

GRADE TO DRAIN AWAY FROM CURB BOX

6.0' MIN.

MINNEAPOLIS PATTERN CURB BOX

CURB BALL VALVE

1" DR 9 HDPE PIPE

6" DIAMETER SCH 40 STEEL
PIPE FILLED WITH CONCRETE,
PROVIDE DOMED CEMENT WASH
CAP, PAINT PIPE WITH (2)
COATS BLUE

4'-0"

1/2" PRE-MOLDED
EXPANSION JOINT
MATERIAL WHERE ADJACENT
TO CONCRETE

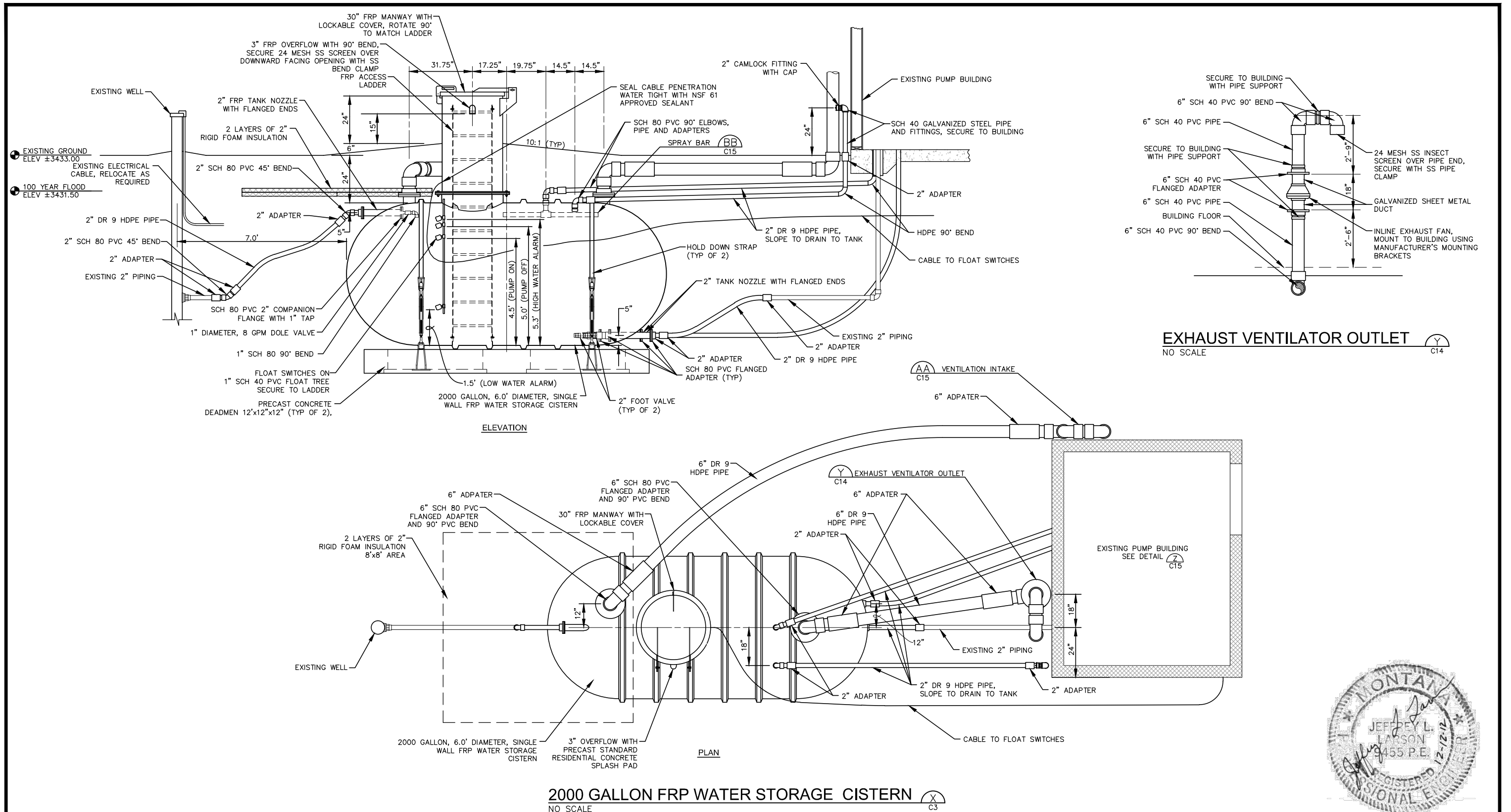
LINE OF SIDEWALK
OR PAVING

3'-6"

2'-0" DIAMETER
CONCRETE BASE

6"

2'-0"



J. LARSON DRAWN BY: J. LARSON CHECKED BY:	DEC. 12, 2012 DATE: DEC. 12, 2012 DATE:	REVISED BY: J. LARSON APPROVED BY:	DATE: DEC. 12, 2012 DATE:	APPROVED BY:	DATE:
				APPROVED BY:	DATE:

**Montana Fish,
Wildlife & Parks**

CISTERN DETAILS
 TONGUE RIVER RESERVOIR STATE PARK
 FWP #7096502

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